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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: : Art Unit:
Allen et al. : Examiner:
Serial No.: : Date: January 25, 2002
Filed: January 25, 2002 :
For: *Analog Voice Activity Detector for Telephone*



I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING
DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST
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WASHINGTON, D.C. 20231, ON: JAN 25, 2002

Date of Deposit

Paul F. Wille

1-25-2002

Signature

Date

DISCLOSURE STATEMENT UNDER RULE 56

Honorable Commissioner of Patents and Trademarks,
Washington, D.C. 20231
SIR:

It is respectfully requested that the art listed below be considered in the examination of the subject application and made of record therein. A copy of the art listed below is enclosed.

4,610,023 discloses (FIG. 5(A)) a speech detection circuit
September 2, 1986 that relies upon an input signal exceeding a first
Noso et al. threshold (1000-1) or a second threshold
(1000-2) for predetermined times and
producing square waves (FIGS. 5(B), 5(C))
representative of those times.

4,720,862	discloses (FIG. 3) detecting speech by
January 19, 1988	comparing calculated normalized residual power
Nakata et al.	with two thresholds α_1 and α_2 ;
4,879,745	discloses (FIG. 2) a control circuit that compares
Arbel	signal power, noise level, and echo in the
November 7, 1989	microphone and line input for selecting one or
	the other;
4,976,287	discloses (FIG. 2) a circuit for comparing the
Reesor et al.	peak amplitude and noise level in the
January 3, 1989	microphone and line input and selecting one or
	the other;
5,418,848	discloses (FIG. 2) an evaluation circuit that
. . .	includes counter 11 that counts up during
Armbrüster	periods of double talk and down during periods
May 23, 1995	without double talk and coupling a non-linear
	filter into the line out when the count reaches a
	predetermined number;
5,598,466	discloses (FIGS. 7, 11, 12) a plurality of
. . .	calculations that are performed to detect
Graumann	speech;
January 28, 1997	
5,692,042	discloses (FIG. 1) hysteresis (154) in a
Sacca	transmit/receive evaluation circuit;
November 25, 1997	

5,764,753	discloses (FIG. 3) an utterance detector including
McCaslin et al.	counter 120 controlled by power estimate circuit
June 9, 1998	82 and absolute value circuit 117;
5,867,574	discloses (FIG. 2) a method for detecting voice
Eryilmaz	activity employing a plurality of calculations;
February 2, 1999	
6,138,040	discloses (FIG. 3) a method for detecting voice
Nicholls et al.	by comparing signal energy to calculated
October 24, 2000	average background noise;
6,212,273	discloses (FIG. 3) processing signal S_{in} from a
April 3, 2001	microphone input and comparing the results
Hemkumar et al.	with a plurality of thresholds;
6,282,176	discloses (FIG. 3) processing signal S_{in} from a
August 28, 2001	microphone input and comparing the results
Hemkumar	with a plurality of thresholds;

It is respectfully submitted that the invention as disclosed and claimed in the above-identified application is not disclosed or suggested by the prior art listed above.

Respectfully submitted,



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